

Amendments to the Claims

1. **(Currently amended)** A reciprocating compressor comprising:
 - (a) a motor unit;
 - (b) a compressing unit disposed over said motor unit and including:
 - (b-1) a compression chamber;
 - (b-2) a piston disposed for reciprocation in said compression chamber; and
 - (b-3) a crankshaft ~~for converting~~ configured to convert rotating action of said motor unit into reciprocating action of said piston; and
 - (c) an enclosed container accommodating said motor unit and said compressing unit and having a lubricant oil pooling portion ~~for pooling~~ configured to pool lubricant oil, wherein said crankshaft includes:
 - (b-3-1) a centrifugal pump disposed at a lower section of said crankshaft and opening into the lubricant oil pooling portion of said container; and
 - (b-3-2) a pair of spiral pumps, functionally independent, disposed at a middle section of said crankshaft, fluidically connected with said centrifugal pump, and having leading grooves running in opposite directions to each other,
wherein said spiral pumps respectively have upper ends and lower ends, and said centrifugal pump is fluidically connected with said spiral pumps only at said lower ends thereof via one communicating section, and
wherein a pair of vertical holes, functionally independent, are provided at an upper section of said crankshaft, said vertical holes opening into said container and fluidically connected with said spiral pumps, respectively.
2. **(Previously Presented)** The reciprocating compressor of claim 1, wherein said centrifugal pump includes a throttle section, disposed in said lubricant oil pooling portion, for allowing the lubricant oil pooled in said container to be drawn into said centrifugal pump, and a

hollow cylinder extending upward from a lower end of said crankshaft and having an axis slanting toward an outer wall of said crankshaft.

3. **(Previously Presented)** The reciprocating compressor of claim 1, wherein a vent hole is provided at an upper section of said centrifugal pump and opens into said container.

4. **(Currently amended)** The reciprocating compressor of claim 1, wherein said crankshaft further includes an eccentric shaft, and a sub-shaft section and a main-shaft section which vertically sandwich the eccentric shaft,

wherein said compressing unit includes a sub-bearing and a main-bearing, both of which are formed to cross with an axis of said compression chamber at substantially right angles, for supporting said sub-shaft section and said main-shaft section respectively, and a linking section that links said piston to said eccentric shaft.

5. **(Previously Presented)** The reciprocating compressor of claim 4, wherein a pair of helical grooves, functionally independent, are provided on an outer wall of said sub-shaft section, said helical grooves including leading grooves running in opposite directions to each other and fluidically connected with the pair of vertical holes respectively, said helical grooves themselves serving to pump the lubricating oil upwardly.

6. **(Original)** The reciprocating compressor of claim 1, wherein said motor unit is a three-phase induction motor.

7. **(Original)** The reciprocating compressor of claim 1, wherein said motor unit is a single-phase resistant-start induction motor.

8. **(Previously Presented)** The reciprocating compressor of claim 3, wherein said vent hole opens through an upper surface of said centrifugal pump, said upper surface facing upwardly in an axial direction of said crankshaft.

9. **(Previously Presented)** The reciprocating compressor of claim 5, wherein a thrust bearing is provided over said sub-shaft section, and said helical grooves provided on said sub-bearing serve to pump lubricant oil up from said vertical holes, respectively, and supply the lubricant oil to said thrust bearing.

10. **(Canceled)**

11. **(Canceled)**

12. **(Canceled)**

13. **(Currently Amended)** A reciprocating compressor comprising:
an enclosed container having a lubricant oil pooling portion to allow for pooling of lubricant oil therein;
a motor unit disposed in said container;
a compressing unit disposed in said container over said motor unit and being arranged to be driven by said motor unit;
wherein said compressing unit includes a cylinder block, a compression chamber formed in said cylinder block, a piston disposed for reciprocation in said compression chamber, and a crankshaft operably coupled to said piston and said motor unit to cause reciprocation of said piston upon rotating action of said motor unit;
wherein said crankshaft includes a lower, main section coupled with said motor unit, a middle, eccentric section disposed above said main section and coupled to said piston, and an upper, sub-shaft section disposed above said eccentric section;

wherein a lower, main bearing is provided about said main section of said crankshaft to rotatably support said crankshaft at said main section thereof;

wherein an upper, sub bearing is provided about said sub-section of said crankshaft to rotatably support said crankshaft at said sub-shaft section thereof;

wherein said main section of said crankshaft has a fluid suction path formed therein and opening into said lubricant oil pooling portion of said container;

wherein said main section of said crankshaft has a pair of first spiral pump grooves formed in an outer surface thereof, said first spiral pump grooves being fluidically connected to said fluid suction path and being functionally independent of one another;

wherein said eccentric section of said crankshaft has a pair of vertical holes formed therein, said vertical holes being fluidically connected to said first spiral pump grooves, respectively, and said vertical holes being functionally independent of one another;

wherein said first spiral pump grooves respectively have upper ends and lower ends, and said fluid suction path is fluidically connected with said first spiral pump grooves only at said lower ends thereof via one communication section;

wherein said sub-shaft section of said crankshaft has a pair of second spiral pump grooves formed in an outer surface thereof, said second spiral pump grooves being functionally independent of one another and operable to pump the lubricant oil upwardly; and

wherein said second spiral pump grooves are fluidically connected to said vertical holes, respectively, such that a first one of said vertical holes is arranged to independently feed lubricant oil from a first one of said first spiral pump grooves to a first one of said second spiral pump grooves, and such that a second one of said vertical holes is arranged to independently feed lubricant oil from a second one of said first spiral pump grooves to a second one of said second spiral pump grooves.

14. **(Previously Presented)** The reciprocating compressor of claim 13, wherein

said main bearing and said sub bearing have axes that are substantially perpendicular to an axis along which said piston is arranged to reciprocate in said compression chamber.

15. **(Previously Presented)** The reciprocating compressor of claim 13, wherein said fluid suction path formed in said main section of said crankshaft constitutes a slant path slanted relative to an axis of said main section of said crankshaft, said slant path constituting a centrifugal pump.

16. **(Previously Presented)** The reciprocating compressor of claim 13, wherein said main section of said shaft has a vent hole formed in an upper section thereof and opening into said container.

17. **(Previously Presented)** The reciprocating compressor of claim 16, wherein said main section of said shaft has an upwardly facing surface facing upwardly in an axial direction of said crankshaft; and
said vent hole opens through said upwardly facing surface of said main section of said shaft.